

Title (en)

Membrane electrode assembly for polymer electrolyte fuel cell

Title (de)

Membraneelektrodenanordnung für Polymerelektrolytbrennstoffzelle

Title (fr)

Ensemble membrane-électrode pour une cellule à combustible à électrolyte polymère

Publication

EP 1480285 B1 20080820 (EN)

Application

EP 04011318 A 20040512

Priority

JP 2003143046 A 20030521

Abstract (en)

[origin: EP1480285A2] A membrane electrode assembly for a polymer electrolyte fuel cell has, as basic components, a polymer electrolyte membrane, a pair of electrode layers which sandwich the polymer electrolyte membrane, and a pair of gas-diffusion layers disposed outside the respective electrode layers. Electric medium layers are respectively provided between the electrode layer and the gas-diffusion layer at one side and between the electric layer and the gas-diffusion layer at the other side. Each of the electric medium layers is constituted of a plurality of carbon whiskers, a plurality of carbon particles and a binder including an electrolyte material. A content G w of the carbon whiskers in each of the electric medium layers is set at 10wt% #▯ G W #▯ 25wt%. Thus, the membrane electrode assembly for the polymer electrolyte fuel cell can keep a high power generating performance by reducing the contact resistance between the gas-diffusion layers and the electrode layers.

IPC 8 full level

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CPC (source: EP US)

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EP 1480285 A2 20041124; **EP 1480285 A3 20060503**; **EP 1480285 B1 20080820**; DE 602004015883 D1 20081002; JP 2004349048 A 20041209; JP 4093566 B2 20080604; US 2005008920 A1 20050113

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